TELECOMMUNICATION SYSTEMS FOR PROVIDING CELLULAR SERVICE TO RF SHADOWS

ABSTRACT OF THE DISCLOSURE

A telecommunications system provides service to a cellular device located within a radio-frequency (RF) shadow of a communication station. The system may include a line-of-sight (LOS) antenna located in a line of sight of the station and a shadow antenna in communication with the LOS antenna and located within a line of sight of the RF shadow. The LOS antenna receives a transmitter signal from the station, and the shadow antenna receives a cellular signal from the cellular device. The LOS antenna also receives the cellular signal from the shadow antenna and, in turn, transmits the cellular signal to the station. Similarly, the shadow antenna receives the transmitter signal from the LOS antenna and, in turn, transmits the transmitter signal to the RF shadow. Accordingly, the cellular device is able to receive the transmitter signal T, and the station is able to receive the cellular signal. The telecommunication system may include a plurality of shadow antennas each for receiving the transmitter signal from the LOS antenna and for transmitting the transmitter signal to the RF shadow along a respective and unique transmission axis.